Microlab® Disposable Tip Hand Probe Instruction Sheet

Congratulations! You have purchased the Microlab® Disposable Tip Hand Probe (p/n 63960-01, 63960-02) from Hamilton. We combine the highest quality materials with skilled craftsmanship to create the highest possible performance level for every precision fluid device we manufacture. With proper care and handling, the Disposable Tip Hand Probe will provide years of use.

The Disposable Tip Hand Probe is designed to work with Hamilton Microlab instruments and is compatible with 50 µL and 1 mL ClickSure® tips.

Note: The Disposable Tip Hand Probe, manufactured by Hamilton Company, is intended for scientific research and laboratory use only and is not intended for human *in vivo* use.

Installation of Probe for Microlab 300 (p/n 63960-01) or Microlab 600 (p/n 63960-02)

Assemble the Disposable Tip Hand Probe by prewetting the probe tube fitting using deionized water and installing it into the output port of the valve. Insert the plug for the probe cable into the probe receptacle on the back of the pump (Microlab 300) or on the side of the pump (Microlab 600). Configure the probe buttons for right or left-hand use within the Configuration menu of the Microlab Controller.

Note: The Disposable Tip Hand Probe comes with the tubing pre-installed. Instructions for replacing the tubing are located in a later section of this document.

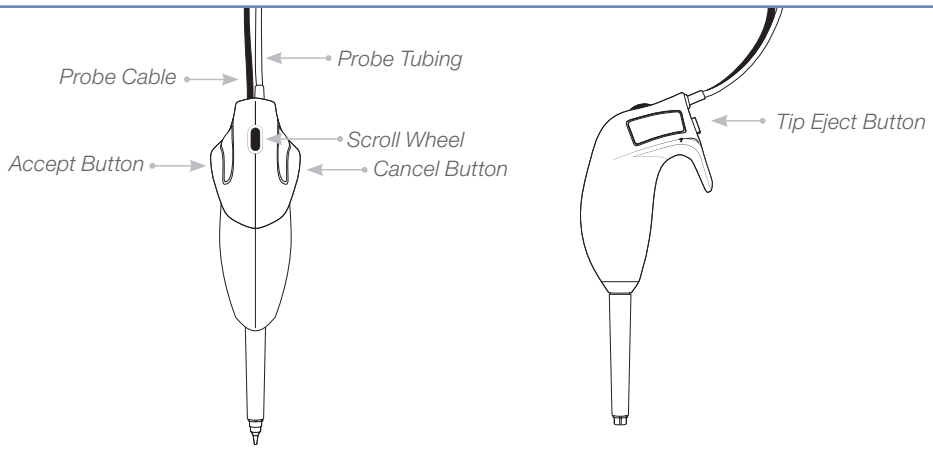

Figure 1. Disposable Tip Hand Probe buttons (right-handed)

Note: The probe on the left is for use with the Microlab 600, while the probe on the right is for the Microlab 300. In the rest of this instruction sheet we will use the Microlab 300 probe in the drawings.

Note: For left-handed operation, the Accept and Cancel buttons are reversed.

Operating the Disposable Tip Hand Probe

The Disposable Tip Hand Probe is held differently than a traditional pipette. Reference Figure 2 for instructions on how to properly hold the hand probe.

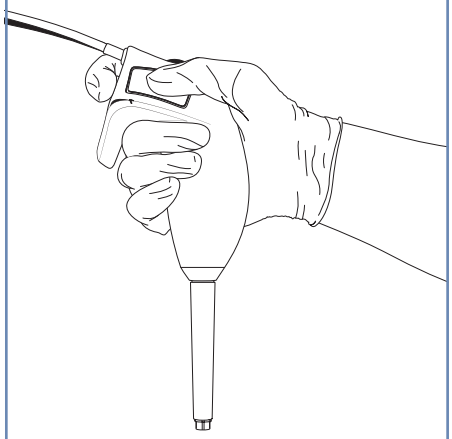

Figure 2. Holding the Disposable Tip Hand Probe (right-handed)

Button Operation

After the probe button configuration is established and the Disposable Tip Hand Probe is held according to Figure 2, the probe is ready for use. The button next to the thumb is the Accept button. The button on the opposite side of the probe is the Cancel button. The Scroll wheel located top center of the probe is used to access method Favorites and to select items from a list box. The button located near the index finger is the Tip Eject button.

Loading the ClickSure® Tips

To load ClickSure tips onto the Disposable Tip Hand Probe, gently press the probe tip into the appropriate ClickSure tip until an audible "click" is heard indicating the O-ring is compressed to hold the tip. Do not jam the Disposable Tip Hand Probe into the pipette tip as this could damage the probe. The O-ring seal has two states, decompressed and compressed. When a ClickSure tip is loaded onto the probe the O-ring is compressed to hold the tip. If the ClickSure tip is manually removed without using the eject button the O-ring will remain in the compressed state and the subsequent tip loading will not load properly. If the O-ring is in a compressed state with no tip installed, simply press the eject button to return the probe to a decompressed state before loading a new tip. Do not leave the O-ring in a compressed state for an extended period of time.

Important: To preserve tips for future use, the tip package can be resealed by pressing the adhesive lid back onto the tip box.

Replacing the Tubing in the Disposable Tip Hand Probe

To replace the tubing on the Disposable Tip Hand Probe, the existing tubing needs to be removed first.

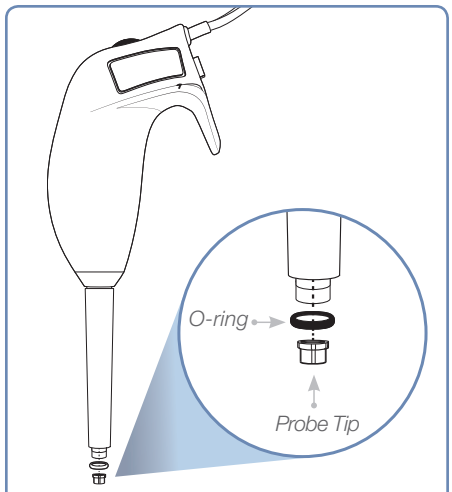

Figure 3. Exploded view of the Disposable Tip Hand Probe

Removing Old Probe Tubing

1. Unscrew the tube fitting from the valve. Unplug the probe cable from the instrument. Remove the tubing and probe cable from the Cable Manager.
2. Unscrew the probe tip and discard.
3. Cut off the tubing end with the ferrule and stainless steel ring and unthread the fitting.
4. Begin by pushing the tube out through the tip of the hand probe. Then pull the remaining tubing out and discard. Reference Figure 3 for details.

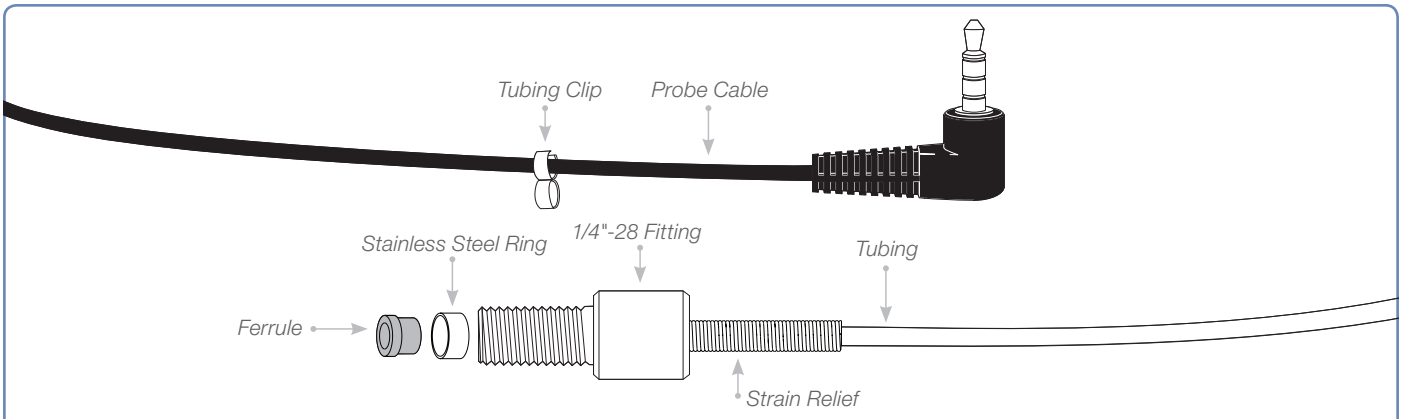

Figure 4. Exploded view of Disposable Tip Hand Probe cable and tubing

Installing New Probe Tubing

5. Gently thread the tubing through the tip of the hand probe. The end without the flange should go into the probe first. As the tubing is being pulled through the probe, thread the tubing through the tubing clips on the probe cable. Pull the tubing until the flange seats inside the end of the probe.
6. Screw the new probe tip onto the probe, and tighten to ensure a good seal.
7. Place the strain relief followed by the ¼"-28 threaded fitting on the non-flanged tubing end with the threads facing the end of the tubing. Move the fitting down the tubing so it does not interfere with the next steps.
8. Place the stainless steel ring and the yellow ferrule on the non-flanged tubing end. The correct orientation of the stainless steel ring is important; the thinner edge of the ring should face toward the fitting as shown in Figure 4.

Note: Correct orientation of the ferrule is with the thinner side facing the fitting.

9. Once all the pieces are assembled onto the tubing, wet the fitting using deionized water. Screw the fitting into the valve while lightly pressing the tubing into the valve to ensure a flush connection. The stainless steel ring will compress onto the ferrule and create a tight connection between the valve and tubing.
10. Re-thread the tubing and probe cable into the Cable Manager by weaving under each tab. Plug the probe cable into one of the two probe receptacles on the instrument.

Replacing the O-ring on the Disposable Tip Hand Probe

1. Gently grasp and hold the ejection sleeve up on the probe.
2. Use forceps or tweezers to remove the old O-ring from the groove on the probe.
3. Discard the old O-ring.
4. Gently thread the replacement O-ring onto the end of the probe and into the groove.

Cleaning the Disposable Tip Hand Probe

Clean the probe with an alcohol such as methanol or ethanol. Do not soak the probe or use acetone to clean as acetone may dissolve the plastic housing of the probe. The Disposable Tip Hand Probe is not autoclavable.

Note: The hand probe's fluid path is manufactured from FEP tubing that is chemically inert. For chemical compatibility, please reference to the instrument user manual.

Replacement Parts

Description	Part Number
Disposable Tip Hand Probe, Microlab 300	63960-01
Disposable Tip Hand Probe, Microlab 600	63960-02
Cable Management System	65160-01
Tubing Kit *(Includes 5 ferrules, 5 stainless steel rings, 5 fittings, 5 strain reliefs, 12 gauge tubing and a probe tip)*	67098-01
O-ring Kit *(Includes 5 O-rings)*	67103-01

Disposable Tip Hand Probe ClickSure® Tips

Description	Part Number
50 µL, non-sterile ClickSure tips, 960 tips racked	235537
50 µL, non-sterile ClickSure tips, 960 bulk	235543
50 µL, sterile ClickSure tips, 960 tips racked	235536
50 µL, sterile, filtered ClickSure tips, 960 tips racked[1]	235544
1 mL, non-sterile ClickSure tips, 960 tips racked	235539
1 mL, non-sterile ClickSure tips, 960 bulk	235545
1 mL, sterile ClickSure tips, 960 tips racked	235538
1 mL, sterile, filtered ClickSure tips, 960 tips racked[1]	235546

[1] These tips should only be used on the Microlab 300.

Warranty Statement

Hamilton Company unconditionally guarantees its products to be free of defects in materials and workmanship. Any product that fails due to a defect will be repaired or replaced at our discretion without cost, provided the device is returned on a Return Materials Authorization (RMA). It is the sole responsibility of the purchaser to determine product application suitability and material compatibility based on the published product specifications.

Return of Goods

Hamilton Company's return and repair policy is written to protect its employees from potentially hazardous materials (e.g., serum, radioactive materials, carcinogenic chemicals, etc.) or any substance that may cause them partial or permanent disability during the inspection or repair process. In returning a product, the customer acknowledges that the product is free from any hazardous materials. Furthermore, the customer assumes responsibility if the returned product proves to be hazardous.

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HAMILTON®

Web: www.hamiltoncompany.com
USA: 800-648-5950
Europe: +41-81-660-60-60

Hamilton Americas & Pacific Rim
Hamilton Company Inc.
4970 Energy Way
Reno, Nevada 89502 USA
Tel: +1-775-858-3000
Fax: +1-775-856-7259
sales@hamiltoncompany.com

Hamilton Europe, Asia, & Africa
Hamilton Bonaduz A.G.
Via Crusch 8
CH-7402 Bonaduz, Switzerland
Tel: +41-81-660-60-60
Fax: +41-81-660-60-70
contact@hamilton.ch

To find a representative in your area, please visit hamiltoncompany.com/contacts.